

NORTH WEST OPERATING UNIT LAND DEVELOPMENT ENVIRONMENTAL MANAGEMENT

# ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr) FOR TSETSE (MANDELA PARK, MOTOPA & PHERA SECTION) ELECTRIFICATION PROJECT



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Project Name:	Tsetse (Mandela Park, Motapa & Phera Section)
Project Number:	NW-EBC-3108-625346- 0001
Project Scope of Work:	The aim of this project is to do electrification of 95 stands at Tsetse Motapa, Phera and Mandela Park Sections. Electrical reticulation, i.e. conductor network, will be provided which can deliver 1.69kVA per stand.  The supply to the village sections shall be from the existing Tsetse 11kV feeder supplied from Army Camp 33/11kV Substation, by means of T-offs
	from poles ACT14/101/1T/15; ACT14/101/1T/28 and ACT14/101/18/5 with 3ph Fox overhead lines.
Completed	19 May 2022

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# **ACRONYMS**

EMPr Environmental Management Programme
EO Environmental Officer

DWA Department of Water Affairs

DEA Department of Environmental Affairs
SAHRA South African Heritage Resource Agency

PPE Personal Protective Equipment
OHSA Occupational Health and Safety Act

SAPS South African Police Services

### **GLOSSARY**

**Environmental Authority:** Statutory body that governs and prescribes the processes that needs to be undertaken for certain construction activities. They are also the decision making authority granting authorisation for specific projects.

**Environmental Impact:** Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's activities, products or services.

**Environmental Management Programme (EMPr):** A programme that guarantees the desired end state of the environment and describes how activities, that could have a negative impact, will be managed and monitored and impacted areas rehabilitated.

**Eskom Environmental Officer:** An individual appointed by Eskom to implement and monitor compliance to the EMPr.

**Contractor:** A person or company appointed by Eskom to carry out stipulated activities.

**Environment:** Surroundings in which an organisation operates, including air, water, land, natural resources, flora, fauna, humans and their interactions.

**Environmental issues (aspect):** Elements of an organization's activities, products or services which can interact with the environment.

**Mitigate:** The implementation of practical measures to reduce adverse impacts or enhance beneficial impacts of an action.

**Monitoring:** An activity which ensures that the requirements of the Environmental Management Programme are met.

## 1. INTRODUCTION

This project is an Eskom Greenfield Electrification. The village Tsetse with Motapa, Phera and Mandela Park Sections falls under Molopo CNC and the Ngaka Modiri Molema Local Municipality. It is part of the 2022/2023 Electrification Plan. The village consist of 95 stands. The houses are of brick and Zinc/Tin type. The development has only water services installed except for the electricity to be supplied by Eskom.

### 2. SCOPE OF EMPr

The Environmental Management Programme (EMPr) scope for Tsetse (Mandela, Motopa & Phera) Section Distribution Electrification project provides guidelines for environmental best practice, to the Contractor commissioned to construct the proposed distribution line. This document shall be seen as part of the contract. The document describes how activities that could have a negative impact on the environment will be managed, monitored and impacted areas rehabilitated.

This Environmental Management Programme ultimately has a long-term objective to ensure that a cradle to grave approach is implemented through ensuring that environmental management considerations are implemented throughout the life-span of the project.

### 2.1. Purpose

This Environmental Management Programme (EMPr) describes how activities that could have a negative impact on the environment will be managed and monitored. This EMPr will ensure that all electrification projects are constructed in an environmentally friendly manner.

## 2.2. EMPr Objectives

Its aim is to ensure that the following are in place:

- There is a process to identify existing or to predict potential negative environmental impacts;
- Objectives and targets are set to ensure negative impacts are mitigated and existing impacts rehabilitated;
- Resources and responsibilities are allocated to each target;
- Actions are implemented to mitigate the identified negative environmental impacts; and Monitoring programmes are developed to track the actions that have been implemented so as to ensure the effectiveness of the action.

# 2.3. EMPr Compliance

The following are required for the compliance with the EMPr:

- Environmental Training to be given to all resources working on project to understand what the possible environmental impacts will be.
- This training is to be given by the responsible EO for the project.
- An Environmental incident register is to be kept on site at all times.
- The EMPr must be available at all time on the construction site.

# 2.4. Project Responsibilities

### PROJECT MANAGER/ CO-**ESKOM ENVIRONMENTAL** CONTRACTOR **ORDINATOR OFFICER** The Project Manager/ Coordinator The EO is responsible for the The Contractor is responsible for the responsible overall implementation of the EMPr during overall execution of the activities in for the construction phase as well as the construction phase including the management of project and EMPr liaison and reporting to Eskom & implementation and compliance at implementation. The following tasks will fall within his / her Contractor. The following tasks will all times with recommendations and responsibilities: fall within her responsibilities: conditions of the EMPr as well as implementation of findings during audits by the EO. Maintain an Be familiar with the Conduct audits during recommendations and construction and compile environmental register which keeps a record of all incidents which occur mitigation measures of this reports EMPr, and implement Liaise with the on the site during construction. these measures. construction team and the These incidents include: Ensure that site activities **Project Manager** on a daily basis comply Recommend corrective Public involvement / with the EMPr. action for non-compliance complaints Confine the construction incidents on Health and safety incidents site to the demarcated Incidents involving construction site Hazardous materials stored area. Ensure that the corrective Rectify transgressions on site measures are through the implemented. implementation of corrective action.

# 3. ENVIRONMENTAL LEGISLATION FRAMEWORK

LEGISLATION	SECTION	RELATES TO
	Chapter 2	Bill of Rights.
The Constitution of South Africa	Section 24	Environmental rights.
	Section 25	Rights in property.
National Environmental	Section 2	Defines the strategic environmental management goals and objectives of the
Management Act No. 107 of 1998 (NEMA)		government. Applies throughout the Republic to the actions of all organs of state that may significantly affect the environment.
	Section 24 (a), (d) & (5)	Listed activities and Regulations
	Section 28	The developer has a general duty to care for the environment and to institute such measures as may be needed to demonstrate such care.
Conservation of Agricultural Resources Act No. 43 of 1983.	Section 6	Implementation of control measures for alien and invasive plant species.
National Heritage Resources Act	The general principles for	Provides general principles for governing heritage resources management throughout
No. 25 of 1999	governing heritage resources in South Africa	South Africa including national and provincial heritage sites, burial grounds and graves; archaeological and paleontological sites, and public monuments and memorials
National Water Act No. 36 of	Section 19	Pollution prevention and Water use.
1998	Section 14	
National Environmental	Sections 26-27	
Management: Air Quality Act No. 39 of 2004	Section 32	Control of dust.
Occupational Health & Safety Act	Section 8	General duties of employers to their employees.
No. 85 of 1993	Section 9	General duties of employers and self-employed persons to persons other than their employees.
Noise Control Regulations of the Environmental Conservation Act No. 73 of 1989.	Section 25	Control of noise.
Fertilisers, Farm Feeds,	Sections 3-10.	Control of the use of registered pesticides, herbicides (weed killers) and fertilizers.
Agricultural Remedies and Stock Remedies Act No. 36 of 1947		Special precautions must be taken to prevent workers from being exposed to chemical substances in this regard.
Nature Conservation Ordinance	Section 98	Identification of any specially protected or rare and endangered species. If these are to
(Transvaal) Act No. 12 of 1983		be affected by the proposed project, a permit from the Director General, Nature

National Forest Act No. 84 of	Section 11 Section 12- 16	Conservation should be obtained prior to removal.  Prohibits the picking of all indigenous plants on public roads and nature reserves without a permit.  Prohibits the destruction/removal of protected trees without a permit.
1998	Section 12- 16	Profibits the destruction/removal of protected frees without a permit.
Hazardous Substances Act	Section 3	Control of hazardous substances.
Fencing Act 31 of 1963	Section 17 Section 22	Any person erecting a boundary fence may clean any bush along the line of the fence up to 1,5 metres on each side thereof and remove any tree standing in the immediate line of the fence.  Any person who opens and leaves a gate open or unfastened or finding a gate open on passing through, neglects to shut and fasten a gate shall be guilty of an offence and liable for conviction.
National Roads Act 54 of 1971	Section 16	Prohibits the dumping of material on or near a national road.
National Environmental Management Biodiversity Act 10 of 2004		Provides for the provisions of the protection of South African flora, fauna and microorganisms.

# 4. ESKOM POLICIES AND PROCEDURES

PROCEDURE	DESCRIPTION
EPC 32-95	Reporting, Recording, Investigating, Costing and Following up of Incidents/Accidents
EPC 32-303	Requirements for the Safe Processing, Storing, Removing and Handling of Asbestos or Asbestos containing material.
DISASAAT8	Provision and Use of Personal Protective Equipment (PPE)
EPC 32-245	Environmental Procedure: Waste Procedure
EPC 32-247	Environmental Procedure: Procedure for vegetation clearance and maintenance within overhead power line servitudes and on Eskom owned land.
DST 34-440	Selection Purchase and Storage of Hazardous Material.

# 5. GENERAL CONDITIONS AND CONTROL MEASURES

Management of construction activities should be controlled by adhering to the Environmental control measures outlined below:

5.1 Environmental Control Measures (Pre Construction Phase, Construction Phase and Operational Phase)

PRE-CONSTRUCTION PHASE		
Aspect and Impact	Applicable Legislation Applicable Eskom Standards	
	The Constitution (Act No 108 of 1996) – Chapter 2, 24 and 25.  Wayleave Agreements Servitudes	
LANDOWNERS	<ul> <li>The Eskom project manager or co-ordinator shall be responsible for ensuring that the land owners have been informed before any work is carried out on site.</li> <li>A kick-off meeting was held with the appointed contractor, Eskom internal stakeholders, local structures and municipality on the 06<sup>th</sup> October 2021.</li> </ul>	
	National Environmental Management Act (No 107 of 1998)  EPC 32- 94	
CONSTRUCTION CAMP	<ul> <li>The camp site needs to be adequately fenced off and construction signage visibly displayed on site</li> <li>Camp site needs to be equipped with an emergency assembly point</li> <li>Emergency assembly point signage should be visibly displayed on site</li> </ul>	

Aspect and Impact	Applicable Legislation	Applicable Eskom Standards
		EPC 32- 94
ACCESS	<ul> <li>No property may be accessed after normal working hours, we</li> <li>No wandering on the surrounding property, under any circum</li> <li>Construction activities are to be confined to the servitude/way</li> <li>Access to the camp site will be managed by the appointed so</li> </ul>	nstances.  lyleave area or as negotiated with the landowner.
	EPC 32- 95	
GATES	Site camp gates shall be kept closed and locked at all times.	
		DISPVWAB1
<ul> <li>Environmental awareness training to be conducted</li> <li>Contractor personnel will have to implement the condition of the EMPr as per the training.</li> </ul>		the EMPr as per the training.

CONSTRUCTION	

Aspect and Impact	Applicable Legislation	Applicable Eskom Standards
		EPC 32- 247
SITE CLEARING	<ul> <li>Site clearing must take place in phased matter, as and when required. The area to be cleared must be clearly demarcated and this footprint strictly maintained.</li> <li>Under no circumstance shall open or dug holes be left on site</li> </ul>	
		EPC 32-245
SANITATION AND ABLUTION FACILITIES	<ul> <li>Adequate ablution facilities to be readily available on site</li> <li>A registered service provider to be utilised</li> <li>Chemical toilets to be cleaned weekly</li> <li>Proof of waste manifest and disposal certificate to be obtained</li> </ul>	ed from service provider
STORAGE OF MATERIALS	Occupational Health and Safety Act 85 of 1993, Hazardous Substances Act	DST 34-440
(HAZARDOUS AND NON-HAZARDOUS	<ul> <li>Material to be storage within a demarcated area with like material placed within the same area.</li> <li>Storage of hazardous materials shall be placed in an enclosed area on a drip tray or an impermeable plastic sheet.</li> </ul>	
	Occupational Health and Safety Act 85 of 1993	EPC 32-95
HEALTH AND SAFETY	<ul> <li>It is the responsibility of Eskom to ensure that all construction relevant health and safety regulations.</li> <li>Contractors safety file needs to be approved prior to commendation.</li> </ul>	n and operational processes and procedures are compliant with the encing on site
	Occupational Health and Safety Act 85 of 1993	
BARRICADING AND LIGHTING	<ul> <li>Every excavation which is accessible to the public or which is persons may be endangered, shall be backfilled prior at the</li> <li>The practise on site is to dig and plant on the same day</li> </ul>	is adjacent to public roads or thoroughfares, or whereby the safety of end of each working day.

COL	ICTDI	ICTION	PHASE
CUI	<b>VOLKU</b>	ノレコレハ	ГГПАЭЕ

Aspect and Impact	Applicable Legislation	Applicable Eskom Standards
	Occupational Health and Safety Act 85 of 1993, National Veld and Forest Act No. 101 of 1998	
FIRES	<ul> <li>No open fires are permitted on site or in the veld</li> <li>Site camp to be equipped with sufficient fire extinguishers</li> <li>In the event that equipment that might pose a fire hazard are used in the construction process, suitable firefighting equipment are to be made available at the construction site and in the construction camp. Emergency preparedness for different incidents e.g. fire, oil spill incidents should be in place and be implemented if and when the need arises (see Annexure B).</li> </ul>	
	NEMA: Waste Act EPC 32-245	
WASTE MANAGEMENT	<ul> <li>A Waste Management Plan must be developed and adhered to by the contractor.</li> <li>Sufficient waste bins are to be made available on site and in the construction camp which make provision for the different waste streams generated on site</li> <li>These need to be adequately labelled</li> <li>Waste generated must be disposed at an appropriate licensed waste disposal site.</li> <li>No containers, scrap metal, conductor etc. may be left on site. Such scrap must be removed and taken to an appropriate disposal site.</li> </ul>	

Aspect and Impact	Applicable Legislation	Applicable Eskom Standards	
	Hazardous Substances Act	EPC 32-245, EPC 32-95	
HAZARDOUS SUBSTANCES	<ul> <li>No oil, diesel or other chemicals may be spilled or discarded anywhere. The site camp should be equipped with an oil spill mop up kit and personnel trained on its use.</li> <li>If an accidental spill occurs, it must be reported immediately to the site supervisor, clerk of work and the responsible Eskom environmental personnel by means of a flash report (Annexure A) and cleaned to the satisfaction of ESKOM and the landowner.</li> <li>All hazardous waste must be suitably enclosed, labelled, stored and removed as per legal guidelines.</li> <li>The storage area must be properly demarcated and cordoned.</li> <li>Drip trays must be used for stationary construction vehicles and for oil containing equipment e.g. transformers</li> <li>These hazardous materials may not be disposed of with regular domestic waste. All excess material must be removed upon completion of any work performed and disposed of in a suitable manner by the respective Contractor.</li> </ul>		
	Occupational Health and Safety Act 85 of 1993 DISASAAT8		
PERSONAL PROTECTIVE EQUIPTMENT	Act and the Regulation fulfilled.	the requirements as set out in the Occupational Health and Safety quipment provided to them and keep it clean and hygienic and in good	
	National Water Act No. 36 of 1998		
WATER MANAGEMENT	<ul> <li>There are no water resources within close proximity of the c</li> <li>Waste generated shall not be disposed of in any water reso</li> <li>No extraction of water from any water resource is permitted</li> </ul>	urces	

Aspect and Impact	Applicable Legislation	Applicable Eskom Standards	
DUST CONTROL	Occupational Health and Safety Act 85 of 1993	EPC 32- 95 EPC 32- 245	
DOOT COMINGE	The contractor to drive at moderate speed to minimise or avoid dust pollution.		
	Occupational Health and Safety Act 85 of 1993  Noise levels will be more prominent during construction however it will be kept localised to the construction site and stipulated site hours.		
NOISE CONTROL			
	Occupational Health and Safety Act 85 of 1993	EPC 32-95	
COMMUNITY ISSUES	<ul> <li>Property owners and local residents shall be treated with respect at all times.</li> <li>All complaints shall be reported, recorded (Public complaints register) and investigated in compliance with the NWOU (EPC 32-95).</li> </ul>		
EPC 32- 95		EPC 32- 95	
BIRD INTERACTIONS	<ul> <li>Only bird friendly structures shall be utilised for the project</li> <li>In the event of bird incidents, the ESKOM EO must be contacted and an investigation conducted</li> <li>The EO will liaise with appropriate experts (EWT) on bird behaviour to identify and mitigate problem areas by recommendial appropriate action.</li> </ul>		

Aspect and Impact	Applicable Legislation	Applicable Eskom Standards
	National Forestry Act No. 84 of 1998	EPC 32-247
BUSH CLEARANCE	<ul> <li>Tree and bush clearance will be strictly limited to the minimum specified in Eskom construction specifications.</li> <li>Bush clearing will be kept within the projects foot print and unnecessary clearing will be prohibited.</li> <li>No vegetation will be left lying around on site.</li> <li>No vegetation clearing in the form of de-stumping, scalping or uprooting shall be allowed.</li> </ul>	
	Occupational Health and Safety Act 85 of 1993	EPC 32-245
OIL MANAGEMENT	<ul> <li>Oil spill mop up kits must be kept on site and used in the case of an oil spill.</li> <li>In the event where the spill is too large to treat with the oil spill mop kits, a registered oil spill contractor must be contacted (Annexure B) and the incident must be reported to the EO.</li> <li>All spills to be recorded on the Environmental Incidences register.</li> </ul>	

Aspect and Impact	Applicable Legislation	Applicable Eskom Standards	
	National Heritage Resources Act No. 25 of 1999	EPC 32-95	
<ul> <li>CULTURAL AND         HERITAGE         ARTEFACTS</li> <li>Should any human remains or artefacts be discovered during construction, construction to ce to be notified</li> <li>The contractor must ensure that his workforce is aware of the necessity of reporting any poss finds to the ECO so that appropriate action can be taken.</li> </ul>		of the necessity of reporting any possible historical or archaeological	
	EPC 32- 95		
MONITORING	<ul> <li>A monitoring programme shall be instituted by the EO</li> <li>Eskom (Project Manager) and the contractor must establish the period and frequency.</li> <li>It is recommended that:</li> <li>This EMPr is viewed as a living document that should change to suit the needs of the project. The EMPr must be presented and explained to the Construction team and/or contractors to sensitise them to pertinent environmental agreements and conditions.</li> <li>That site visits be conducted at intervals for the duration of the project by the relevant EO, contractor representatives and PM.</li> <li>A post-construction audit will be conducted to identify non-conformance for which corrective action must be taken. Corrective action must take place before the contract is completed or signed off.</li> <li>The site must be reinstated and rehabilitated to its original condition.</li> </ul>		
FINAL SITE			
INSPECTION		oeen re-instated. Considering the condition of the land in the study of this development seems to outweigh any negative impacts that	



# EMERGENCY PREPAREDNESS PLAN 2022-2023 NORTH WEST OPERATING UNIT

In terms of EPC 32-95, it is the responsibility of the Contractor or next in charge to report an environmental incident to the Environmental Officer (EO) for the project. This must be done by sending a flash report detailing the nature of the incident and an SMS to the EO on 076 867 7065 to assist rapidly.

# **ANNEXURE A: ENVIRONMNTAL RESOURCES**

Name	Work area	Contact Details
4 14 1 2 1 1	D ( )	004 504 4700/ 044 500 7070
Mpho Sebole	Rustenburg	084 504 1730/ 014 523 7079
Environmental Advisor		SeboleMD@eskom.co.za
Oarabile Mabula	Rustenburg	076 867 7065/ 014 565 1169
<b>Environmental Quality</b>	_	MabulaON@eskom.co.za
and Management Officer		

**Oil spills** - the following oil spill clean-up companies can be contacted for a quotation. This quotation must be approved by the Senior Supervisor before approval can be given to the contractor. Major oil spills under emergency conditions may be authorised directly by the relevant Sector Manager.

## **ANNEXURE B: OIL SPILLS**

COMPANY	CONTACT PERSON	TELEPHONE NUMBER	FAX NUMBER	24 HOUR SPILL RESPONSE
ENSA	William Mafatshe	072 243 0967	086 642 8349	083 498 8798
IWS	Hugo Kotze Diana Bezuidenhout	011 826 3978		083 654 4274 083 498 8798

## **ANNEXURE C: REMOVAL OF SNAKES**

CONTACT PERSON	AREA	CONTACT NUMBER
Gert Plom	Rustenburg	082 4488 535 014 592 7478
Paul Games	Chairman of Herp Club	083 274-4960
Gerhard		014 536-3150

CONTACT PERSON		
Megan Saffer	Office Hours	011 386-6044
Pricilla Fleischer	Office Hours	011 386-6052
NHLS SWITCHBOARD	24 hours	011 386-6000
Dr Mark Blaylock	Emergency number for venom	083 463-3011
Dr Roger Blaylock	Emergency number for venom	083 652-0105
Cost of Antivenom:		
Office Hours:	Polyvalent R540.00 per 10ml	Monovalent R894.00 per 10ml
After Hours:		
This includes VAT.	10ml	Monovalent R1 162.00 per 10ml
	Courier will be charged separately	

# **ANNEXURE D: BEE REMOVAL**

COMPANY	CONTACT PERSON	CONTACT NUMBER
Southerns-Beekeepers Association	Grand Arrand	083 652 0760
Removal Honey		072 142 0505

# Organizations That May Need to be contacted

No	Department	Contact Details
1	Fire Department	014 590 3333
2	South African Police Services (SAPS)	08600 10 111
3	Department of Water Affairs	012 253 1093/012 253 1026
4	Department of Environmental Affairs (DEA)	012 310 3911/012 310 3137